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THE DIRECT INSTRUCTION PROGRAM FOR TEACHING READING.

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DESCRIPTORS- READING PROGRAMS, READING SKILLS, READING DIFFICULTY, LANGUAGE HANDICAPPED, *SLOW LEARNERS, CULTURALLY DISADVANTAGED, ORAL EXPRESSION, *SKILL DEVELOPMENT, *BEGINNING READING, *PRESCHOOL CHILDREN, PRESCHOOL LEARNING, INSTRUCTIONAL DESIGN, *TEACHING PROCEDURES, BEREITER ENGELMANN PRESCHOOL, ILLINOIS,

UNTIL SUBSTANTIAL MASTERY HAS BEEN ACHIEVED BY THE SLOWER READERS, THE SUB-SKILLS TO LEARNING THE MECHANICS OF READING SHOULD BE MADE THE OBJECTIVES OF INSTRUCTION. FOCUSING ON WORDS, BLENDING, AND HANDLING IRREGULARS ARE THREE OF THE SUB-SKILLS NEEDED. TO TEACH THE CHILD TO FOCUS ON WORDS, THE TEACHER INTRODUCES VERBAL RHYMING AND ALLITERATION TASKS. THE FIVE MAJOR BLENDING STAGES ARE (1) (ORAL) THE CHILD BLENDS TOGETHER TWO PARTS OF A FAMILIAR WORD, (2) (ORAL-VISUAL) THE CHILD BLENDS THE LETTERS IN WRITTEN WORDS BEFORE HE CAN IDENTIFY ALL THE LETTERS IN THESE WORDS, (3) (VISUAL) THE CHILD IDENTIFIES AND BLENDS ALL THE LETTERS IN WRITTEN WORDS, (4) (ORAL) THE CHILD UNBLENDS (SPELLS) A WORD INTO ITS SEPARATE LETTERS, (5) (VISUAL) THE CHILD LEARNS THE WRITTEN EXTENSION OF ORAL SPELLING. THE FINAL STEP IN THE BEGINNING READING PROGRAM IS THE INTRODUCTION OF IRREGULARLY SPELLED WORDS. THE PROGRAM HAS HAD GOOD RESULTS (ONE GROUP OF CULTURALLY DEPRIVED FOUR YEAR OLDS TESTED AT THE 2.6 GRADE LEVEL IN READING AFTER ABOUT 100 HOURS OF INSTRUCTION). THIS PAPER WAS PRESENTED AT AND PUBLISHED BY THE FOURTH INTERNATIONAL I.T.A. CONFERENCE, MCGILL UNIVERSITY, MONTREAL, CANADA, AUGUST, 1967. (COD)

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The Direct Instruction Program for Teaching Reading*

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Whether a child learns to read by a whole-word, phonic, or a combination approach, he must at some time in his reading career master the mechanics of translating letter sequences into sound sequences. Since the steps that are involved in this decoding process are not always clear when one works with "average" children, my colleague Siegfried Engelmann and I are developing a program designed for "special" children: culturally disadvantaged, slow-learning, language deprived or problem readers--that considerable segment of the school population that has great difficulties learning to read.

Our approach has been to identify the major sub-skills critical to learning the mechanics of reading and to make these sub-skills objectives of instruction. On the average, children with MA's of about five years learn to read, as we define reading, after fifty hours of instruction.

With most educators we agree that mature reading provides a humanistic experience on the level of meaning and thinking, and we agree with Dolch (1960) that ideally, reading should become "a mental process of the highest level and greatest possible educative value." But our position is that beginning reading should concentrate on mechanics until substantial mastery has been achieved. Our position further is that the time normally allocated to readiness, discussions of comprehension, building meaningful experiences, teaching to verbalize thoughts and feelings and ideas should be devoted to mechanics. We do not dispute that the broader skills must be taught at some point in the reading instruction, but we feel that the special child must concentrate

on mastering the mechanics of reading for a good portion of his beginning year.

Focus on the special child

During 1965-1966 I taught 20 middle-class four-year-olds with i.t.a., and after 50 hours of instruction they tested at the 2.2 reading level (Bereiter 1967); after 100 hours they read at grade level 3.4. These research results suggest that i.t.a. can be a tremendous tool and that early reading proficiency does not necessarily respect chronological age.

Our first clues as to the importance of the sub-skills emerged from the slower of these "average" middle-class children, for even with their comparatively rich background of experience, they had some difficulties in learning several of the essential sub-skills. It was not, however, until this year, when I started working with "special" slower learning culturally deprived four-year-olds, that we found it necessary to provide a program that would teach these critical sub-skills.

The contrast between the middle-class and the disadvantaged children has been a valuable experience. We began to see why materials designed for the "average" child not only failed to teach the slower child, but often delayed his progress. When the instruction devised for an average child failed to teach a requisite skill to the slower child, the slower child stopped and remained stopped sometimes for weeks until we found a new way to teach that skill.

The special learner has provided a natural laboratory for focusing on precisely which skills are essential to reading because:

1. The child learns slowly, which means that the curriculum designer can observe the problems he encounters in some detail.
2. The child probably has not learned or only partially learned the skill outside of the instructional setting. This means that if he learns to handle a particular sub-skill, we can credit the instruction with having taught it (Engelmann 1967).

What are the major sub-skills?

Three of the sub-skills--words, blending, and irregulars--will be discussed in this paper.

1. Words

The special child must be taught to focus on words and parts of words. To teach the child to focus on parts of words, the teacher introduces verbal rhyming and alliteration tasks. In rhyming, the child must hold part of the word constant (the ending) and vary the other part.

"I want to hear some words that rhyme with jellybean.

Here's one: sssellybean.

Here's another: mmmellybean.

And another: fff....."

To teach alliteration (in which the beginning part stays the same and the ending changes), the teacher says,

"I want some words that start out the same way as MMM-om.

Here's one: MMM-otor.

Here's another: MMM-ickey Mouse.

Another: MMM-....."

If the child has not mastered rhyming and alliteration skills, he will have a difficult time reading. He will not understand how similar words are similar. Two words are similar because they share a part that makes the same sound. If the child cannot hear the way in which sat and mat are the same he is not in a very good position to look for the sameness in the orthography of the two words.

But, asking the special child, as do many reading programs, to tell if sat and mat end with the same sounds is a hopeless task for several reasons:

(a) The child may not know the concepts of same and not same. These are difficult concepts and should be taught in a language context.

(b) In some dialects speakers leave off the t sound at the end of the word. Therefore the pair becomes a choice not between sat and mat, but between sa and ma. Sa thus could be Sam, sat or Sa' Claus. Ma could be mat, man or part of mas' to cover a face.

(c) In some dialects speakers can decode the phonic s-a-t, but must first be shown the word sat refers to the action they describe with the word set. Other speakers must retranslate from sa-yit to sat.

(d) The child has difficulty hearing sameness in short words, whereas exercises focusing on sat and mat in Sat-man and Mat-man as rhymes of Bat-man are easier for him to handle.

(e) In order to understand what "sound the same" means, the child must already have mastered the skill we are trying to teach.

The special learner must also be taught that both spoken and written words have parts and that these parts appear in certain inviolable order. Since no learner can be taught all the words he will ever encounter, we must teach the convention that any word--familiar or unknown--must be decoded into sounds that are patterned in a unique order.

The culturally-deprived child may decode the word story as stroy. He may not know the meaning of story, but before he can think about meaning, he must decode the word correctly. The middle-class child may know the meaning of the word story, but if he decodes it as stroy and possibly changes it to destroy he violates the order of the parts of the word and cannot derive the intended meaning.

2. Blending

Parts of the unblended word are separated by pauses in time. The well-known cuh-a-tuh therefore does not sound like cat to the special child because the parts of the blended word cat are not separated by pauses. Also there are sounds in the unblended word such as the uh on cuh and tuh that do not appear in the blended word.

We have identified five major blending steps to teach the relationship between blended and unblended words. Convinced by our experience in 1965 with i.t.a. and encouraged by the research results recommending the use of an intensive phonics approach (Gurren and Hughes 1965), we adopted a symbol-sound alphabet. Teaching one sound for each symbol, we initially present the letters s,m, r,f,n,a (fat), o (fox), i (fit), ē (me) selected not on the basis of "linguistic" considerations or frequency of use; rather they are selected on the basis of specific difficulties the child has in learning to read. The consonants are continuous sounds; no stop sounds are used until the child has mastered blending the continuous ones. These letters allow for the most precise demonstration of the relationship between the unblended word and the blended word. Letters with stop sounds that may also be visually confusing such as b,d,p,g, though of high use frequency, are not introduced until later. Our five major blending stages [taught concurrently with other tasks] are:

Blending I (oral) The child blends together two parts of a familiar word.

He is asked, "Do you know what this is? ham (pause) burger." If he cannot blend hamburger, he is shown the picture and asked, "Is this Superman? No. What is it?" He is shown the relationship between his response hamburger and the unblended word. In time, he learns to telescope the two parts of a compound word.

The child blends together more than two parts of a familiar word.

The pattern is similar to the above step. "Do you know what this is? tel-e-vi-sion." If he blends the word, he gets to see the picture and moves on.

The child blends together many parts of a familiar word in a story context.

One-minute stories are told in the reading class, where the last word is spelled out by sound. "Once there was a big g-ō-s-t. What was there?" "He wanted to eat some sweet c-a-n-d-ē. What did he want?" Increased proficiency in this task enables the teacher to spell out the entire story, the children telescope her words and answer in a completely meaningful manner. The process is similar to a foreign-speaking parent addressing his child in the foreign tongue and the child answering in English. The teacher may spell orally

I w-a-n-t t-o j-u-m-p o-n a c-r-o-c-o-d-ī-l.

The children might respond:

"You better not, that mean animal might eat you."

Blending II (oral-visual) The child blends letters before he can identify all the letters in written words.

On one side of a card is a vivid picture of a familiar object and the reverse is the word. The instructions are, "Tell me the word and I'll show you the picture." The

teacher points to and identifies the letters (by sounds) in m-a-n. After the child telescopes the word man, he is asked to tell what the object is. For man he might say "like a Daddy," or "man not lady." Then the card is reversed and the picture shown. If the word contains known letters, he is encouraged to identify them.

Blending III (visual) The child identifies and blends all the letters in written words.

The teacher teaches the child to blend without pausing between letters. The child is taught the convention that one sound is held until the next one is produced. Sounding out ran is rrraaannn. In this unblended word there are no pauses; there are no extra sounds. Its relationship to ran is therefore quite obvious. Stop sounds are a much later series of steps.

The first stop sounds are introduced at the end of three-sound words such as rat, rag, rab. Then stop sounds are moved to the beginning of three-sound words. To demonstrate how they work, the teacher introduces a familiar ending such as

an
an
an

Then she adds familiar continuous-sound beginnings:

fan
man
ran

Then these beginnings are erased and stop-sound beginnings are substituted:

can
tan
ban

Attention is called to the vowel before the word is attacked. "What does this say? aa. So this word is caa-n." By calling attention to the vowel, the teacher allows the child to produce the sounds of the first and second letters together, caa, thereby eliminating some of the difficulties associated with stop-sounds.

Blending IV (oral) The child unblends (spells) a word into its separate letters.

The special learner has considerable difficulty understanding the alphabetic principle--that words have spelling. Spelling by sound is taught soon after the child achieves simple reading. Spelling is asking the child to unblend, or give the parts of the telescoped word. He is given the instruction, "Spell fa." He is then taught by a drawn-out pronounciation to hear the separate parts fffaaa and telescope them as fa. He then progresses to fat and other two-sound and three-sound words.

Blending V (visual) The child learns the written extension of oral spelling.

We use a variation of the experience chart. The teacher asks the children to produce a one-line story. They may respond with "I like to eat ice cream." Teacher repeats

the sentence asking them to unblend or spell each word as she writes it on the board in the alphabetic convention they have been taught. The children reread the "story," and the teacher points to the word līk, identifying it as eat. The children learn to correct her and respond with "It can't be eat, it has no ē and no t, and there's an i there."

3. Irregulars I The "regular" irregulars.

This is the final step in our beginning reading program and is actually taken in gradual stages starting when the children begin reading stories. We start introducing irregularly spelled words. These words are presented as "funny words," that is, words that are spelled a sound at a time, the way any other word is spelled, but words that are pronounced as if they were spelled differently. Handling irregulars in this way is extremely important. The child must learn that the spelling of words is not arbitrary. He must realize that the word like is always spelled the same way; but that it is pronounced as if it were spelled differently, without the final e.

We say, "It looks like līk-e, but we don't say līk-e, we say līk."

The extension of Blending V (spelling) with the experience chart comes at this time when the teacher spells like from the children's dictation, adding the final e and points out that this is how it is spelled and the e is just there. Unless irregulars are handled in this way, a certain number of children will abandon any kind of phonetic attack, trying to remember individual words or guessing at the word like by calling it live or let.

Irregulars II The "irregular" irregulars

After introducing the idea of "funny words" and teaching the child the convention for handling them, we concentrate on an initial set of irregulars by removing the long vowel sign from he, she, we, me, go, so, no. We then progress to other common words that are not as easy to handle as either of the above sets of irregulars such as to, want, was, were, of, etc.

The need for materials

The program in its present form is relatively effective. Specially trained teachers have achieved good results with culturally disadvantaged youngsters. One group of these children tested at the 2.6 grade level in reading after about 100 hours of instruction.

As an alternate solution to the special training needed to handle the tasks properly, Engelmann and I are developing a program that does it all. This program will incorporate the various skills outlined in this paper into a package that teachers can use.

Reading materials should enrich the child's vocabulary and comprehension and should themselves be an instrument of instruction. The language style and content of the readers will stress the teaching or school language the child will need to master to succeed in public school. Many of the basic language concepts to be covered are those from the work of Bereiter and Engelmann 1966; Osborn 1967; Englemann and Engelmann 1966.

This paper has explained the philosophy and method of a reading program developed for those children who could become problem readers. It has outlined some of the basic sub-skills, among them words, blending, and irregulars. Further research during 1967-68 will test this reading program

1. In our University of Illinois preschool and kindergarten;
2. In demonstration classes for the disadvantaged from preschool through grade three;
3. In remedial reading classes for grades one through six and
4. In a program for high school age dropouts.

Conference participants are invited to view the short film entitled "Preschool Reading--University of Illinois" scheduled for showing at special sessions during this conference. This film shows two reading groups of young disadvantaged children after the first fifty hours of instruction.

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* The reading programs discussed in these publications are not in current use in our school.